

REVISIONS TO CLAIMS

- 1 1. (previously presented) A light source (1) comprising
2 - a discharge vessel (2) which is filled with a filling gas,
3 - an electron beam source (4) arranged in vacuum or in a region of low pressure,
4 which source (4) generates electrons (12) and propels them through an inlet foil
5 (8) into the discharge vessel (2),
6 characterized in that the inlet foil (8) comprises a diamond layer.

2. (currently amended) A light source as claimed in claim 1, characterized in that
the diamond layer has a thickness below 100 μm , ~~in particular below 50 μm ,
advantageously below 20 μm .~~

3. (previously presented) A light source as claimed in claim 1, characterized in that
the diamond layer has a frame (7).

4. (previously presented) A light source as claimed in claim 1, characterized in that
the diamond layer has a metal brazing layer.

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5. (previously presented) A light source as claimed in claim 1, characterized in that the diamond layer has an organic adhesion layer.

6. (original) A light source as claimed in claim 1, characterized in that the electron beam source comprises a thermionic electron emitter.

7. (original) A light source as claimed in claim 1, characterized in that the electron beam source comprises a field emitter.

8. (original) A method of manufacturing a foil (8) for a light source (1),

characterized by the following process steps:

- carbon atoms are deposited on a substrate (7) so as to form a diamond foil (8),

and

- a portion of the substrate is etched away such that a remaining portion (7) of the

substrate forms a frame (7) for the diamond foil (8).

9. (original) A method of manufacturing a foil (8) for a light source (1),

characterized by the following process steps:

- carbon atoms are deposited on a substrate so as to form a diamond foil (8),

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- 4 - the diamond foil (8) is removed from the substrate, and
- 5 - the diamond foil (8) is brazed to a frame (7).

1 10. (original) A method of manufacturing a foil (8) for a light source (1),
2 characterized by the following process steps:

- 3 - carbon atoms are deposited on a substrate so as to form a diamond foil (8),
- 4 - the diamond foil (8) is removed from the substrate (7), and
- 5 - the diamond foil (8) is adhered to a frame (7).

1 11. (previously presented) A gas discharge lamp (1) comprising

- 2 - a discharge vessel (2) which is filled with a filling gas, which vessel is adapted to
3 produce non-coherent visible light from at least one wall in response to received
4 radiation produced by the gas;
- 5 - an inlet foil comprising a diamond layer;
- 6 - an electron beam source (4) arranged in vacuum or in a region of low pressure,
7 which source (4) generates electrons (12) and propels them through the inlet foil
8 (8) into the discharge vessel (2), causing the gas to produce the radiation.

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- 1 12. (previously presented) A method of manufacturing a light source, comprising,
2 not necessarily in the following order:
3 - providing
4 • a discharge vessel (2) which is filled with a filling gas, which vessel is adapted
5 to produce non-coherent visible light from at least one wall in response to
6 received radiation produced by the gas
7 • an electron beam source (4) arranged in vacuum or in a region of low pressure,
8 which source (4) generates electrons (12) and propels them into the discharge
9 vessel (2), causing the gas to produce the radiation;
10 - inserting an inlet foil between the source and the vessel, which inlet foil comprises
11 a diamond layer.

13. (previously presented) The method of claim 12, wherein the light source is a gas discharge lamp.

14. (new) The light source of claim 2, wherein the diamond layer has a thickness below 50 μ m.

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15. (new) The light source of claim 2, wherein the diamond layer has a thickness below 20 μ m.